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5. (New) System for displaying an image on a screen formed of a matrix of pixels each including a given number of subpixels with primary colors, comprising a symbol generator which delivers information characteristic of dots of the image to be displayed and is connected to an image memory which is itself connected to a correlator, the correlator configured to determine a luminous level of each pixel or subpixel of the screen by a processing using a filter, dubbed microregion, comprising a given number $P \times Q$ of luminous weighting coefficients applied to a set of $P \times Q$ pixels or subpixels around said pixel or subpixel to be processed, wherein

the image memory is organized to allow reading of n pixel or subpixels in parallel, n greater or equal to two,

the correlator comprises a luminance path which performs a synchronous processing in parallel of the luminous levels of the n pixels or subpixels by selecting a microregion, for each pixel or subpixel, and by combining, at a given instant, the luminous weighting coefficients of the n microregions selected for each of the n pixels or subpixels, with the coefficients already contained in the correlator and originating from successive correlations of the coefficients of all the microregions previously selected.

6. (New) System according to Claim 5, wherein the selecting of a microregion, for each pixel or subpixel, is undertaken as a function of the position determined by the generator of the dot of the image to be displayed in the pixel or subpixel.

7. (New) System according to Claim 5, wherein the symbol generator determines a color of the dot of the image to be represented in a form of a color code and generates an attribute making it possible to attribute the color to a stroke element or to a background element, and the correlator furthermore comprises a stroke color path and a background color path, allowing the synchronous and simultaneous processing of the color of the n pixels or

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subpixels either by the stroke color path, or by the background color path, as a function of the attribute

8. (New) System according to Claim 7, wherein the stroke color path is connected to the luminance path in such a way as to manage intersections and superpositions of strokes of different colors, as a function of predetermined color priority codes.

9. (New) System according to claim 5, wherein the luminance path and chrominance path of the correlator are formed by a union of independent lines, and a link between the lines for taking into account relations between the pixels or subpixels in a vertical direction is effected by reinjecting into a given line content of data emanating from an adjacent line.

10. (New) System according to Claim 7, wherein the correlator further comprises a stroke color generator and a background color generator configured to transform the colors of the stroke color path and of the background color path, delivered in a form of codes, into red, green, blue intensity levels, and a mixer for combining in parallel for the n pixels or subpixels to be processed, the outgoing data of the luminance path, of the stroke color generator, of the background color generator, to construct pixels or subpixels actually intended for display in the matrix display.

11. (New) System according to Claim 10, wherein the mixer comprises a first function of performing for the n pixels or subpixels products of brightness levels emanating from the luminance correlator times the red, green, blue intensity levels.

12. (New) System according to Claim 11, wherein the mixer comprises a second function of managing for the n pixels or subpixels inlaying of stroke elements into a background of a same color by performing an outlining function.

14. (New) System according to Claim 13, wherein each microregion comprises 4X4 coefficients and each coefficient exhibits 8 possible luminous levels.

Abstract therefor: